



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,678	03/23/2001	Woo Sik Yoo	M-9087 US	5755

7590 06/09/2005

MacPherson Kwok Chen & Heid LLP
1762 Technology Drive
Suite 226
San Jose, CA 95110

EXAMINER

DONG, DALEI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 09/815,678	Applicant(s) YOO, WOO SIK	
	Examiner Dalei Dong	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-44 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 33-44 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 33, 35 and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,861,302 to Antal in view of U.S. Patent No. 3,529,208 to Frungel.

Regarding to claim 33, Antal discloses in Figure 2, a method of modulating a light source comprising: providing a hollow tube (3) having a first end with a first endcap and a second end with a second endcap, an inlet valve (4) and a first electrode (shown in Figure 2) associated with the first end and an outlet valve (4') and a second electrode

(shown in Figure 2); opening the inlet and outlet valves to provide for a simultaneous modification of gases between the first electrode and the second electrode; flowing a first gas (flushing gas) from between said first and second electrodes out of the light source through the outlet valve (see column 2, lines 45-51).

Antal further discloses in a different embodiment simultaneously flowing a second gas (fill gas) through the inlet valve into between said first and second electrodes, the first gas being different from said second gas; and closing the inlet and outlet valves (see column 4, lines 28-36).

However, Antal does not disclose flowing a portion of a first gas without a pump and flowing a second gas without a pump.

The Examiner asserts that it is old and well known in the art to have supply and flow gases without the use of a pump; the mere high gas pressure is sufficient to supply and flow gases into and out of tubes. The Frungel reference teaches flowing a portion of the first gas out the tube by opening a outlet valve (see column 2, lines 45-67). The Frungel reference also teaches utilizing the high gas pressure container to adjust the pressure of the gas within the tube by opening and closing valves without a pump (see column 3, lines 1-16) for the purpose of modifying the light intensity and light distribution without effecting switch changes in the electrical parts.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the changeover valve of Antal for the different gases without using a pump of Frungel in order modify the light intensity and light distribution without effecting switch changes in the electrical parts.

Regarding to claim 35, Antal discloses the second gas is selected from the group consisting of: inert gases, krypton, argon, neon, xenon, helium, mercury, neon/helium mixture, neon/argon mixture, Oxygen, hydrogen, deuterium, and nitrogen.

Regarding to claim 37, Antal discloses the inlet and outlet valves include seals to prevent gas from leaking past or through the valves from the tube.

Regarding to claim 38, Antal discloses the claimed invention except for the hollow tube comprises a straight hollow tube shape. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establish the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a structure of a particular structure.

Regarding to claim 39, Antal discloses the claimed invention except for the hollow tube comprises a serpentine shaped hollow tube. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establish the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by

routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

Regarding to claim 40, Antal discloses the claimed invention except for the hollow tube comprises a lamp array of serially connected light source. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establishes the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

Regarding to claim 41, Antal discloses the claimed invention except for the hollow tube comprises a rectangular planar shaped hollow tube. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establishes the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein

must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

Regarding to claim 42, Antal discloses the claimed invention except for the hollow tube comprises a spiral shaped hollow tube. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establishes the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

Regarding to claim 43, Antal discloses the claimed invention except for the hollow tube comprises a ring shaped hollow tube. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establishes the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

Regarding to claim 44, Antal discloses the claimed invention except for the hollow tube comprises a channel shaped hollow tube. It is old and well known in the art to shape the lamp into different shapes in order to accommodate the design specification. Further, Applicant does not establishes the criticality of the shape of the lamp to the invention and hence, the different shape of the lamp can be determined by routine experimentation by one having ordinary skill in the art. Furthermore, it has been held that to be entitled to weight in method claims the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a sue of a particular structure.

4. Claims 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,861,302 to Antal in view of U.S. Patent No. 3,529,208 to Frungel and in further view of U.S. Patent No. 4,303,290 to Tsunekawa.

Regarding to claim 34, Antal in view of Frungel discloses a method of modulating a light source wherein opening the inlet and outlet valves to provide for a simultaneous exchange of gases between said first electrode and the second electrode; flowing a portion of a first gas from between the first and second electrodes out of the light source through the outlet valve without a pump, and simultaneously flowing a second gas through the inlet valve into between the first and second electrodes without a pump, the first gas being different from said second gas.

The Antal reference and Frungel reference does not disclose the first gas is selected from the group consisting of: inert gases, krypton, argon, neon, xenon helium,

mercury, neon/helium mixture, neon/argon mixture. Oxygen, hydrogen, ditrium, and nitrogen.

The Tsunekawa reference teaches a method of modulating a light source, wherein uses of inert gases of krypton, argon and neon for the purpose of evacuating a light source as quickly and easily as possible (see column 2, lines 57-63).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the old and well known gases of Tsunekawa and the pump less exchanging gas of Frungel for the gas exchanging system of Antal in order to provide a method of evacuating a light source as quickly and easily as possible.

Regarding to claim 36, Antal in view of Frungel and in further view of Tsunekawa discloses the first gas is selected from the group consisting of: inert gases, krypton, argon. neon, xenon helium, mercury, neon/helium mixture, neon/argon mixture. Oxygen, hydrogen, ditrium, and nitrogen; and the second gas is selected from the group consisting of: inert gases, krypton, argon. neon, xenon helium, mercury, neon/helium mixture, neon/argon mixture. Oxygen, hydrogen, ditrium, and nitrogen and the motivation to combine is the same as above.

Response to Arguments

5. Applicant's arguments filed April 20, 2005 have been fully considered but they are not persuasive.

Art Unit: 2879

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Antal reference teaches the use of a pump to rapidly and efficiently remove contaminations from the discharge vessel. The Examiner asserts that the pump in the Antal reference is utilized to add pressure to the first and second gases to reach the equilibrium pressure within the discharge vessel (see column 2, lines 45-51). The Frungel reference on the other hand teaches the first and second gases already contained in a high-pressure container and the pressure within the discharge vessel is adjusted by a series of valves without the use of a pump. The Examiner asserts that by utilizing high-pressure containers of the Frungel reference the use of pump of the Antal reference is therefore not necessary. The pressure induced on the first and second gases of the Frungel could still achieve the rapid and efficient removal of contaminations from the discharge vessel of the Antal reference. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the changeover valve of Antal for the different gases without using a pump of Frungel in order to modify the light intensity and light distribution without effecting switch changes in the electrical parts.

Art Unit: 2879

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.D.

June 6, 2005



Joseph Williams
Primary Examiner
Art Unit 2879